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June 24, 2015

Mr. Chris Black
EPA Project Coordinator
U.S. Environmental Protection Agency, Region 5
77 West Jackson Blvd.
Corrective Action Section, LU-9J
Chicago, IL 60604-3590

Subject: Additional Materials to Address Changes to the Long Term Monitoring and Contingency Programs Proposed in 2015 First Quarter Progress Report, Former Warner Electric Clutch and Brake Facility, Roscoe, Illinois (RCRA-05-2013-0005)

Dear Mr. Black:

Thank you for meeting with us on June 11 to discuss the proposed changes for long term monitoring and contingency programs at the former Warner Electric Clutch and Brake facility (Warner) in Roscoe, Illinois. As a follow up to the meeting, this letter provides materials to address the request for reduced sampling frequency for monitoring wells on Hononegah Road, as well as an evaluation of the potential for enhanced reductive dechlorination (ERD) along Edgemere Terrace to increase vapor intrusion (VI) risk.

The attached figures (Figure 1 through Figure 4) portray the long term concentration trends for trichloroethene (TCE) in each of the four monitoring wells located on Hononegah Road (LTMW-04, LTMW-05, LTMW-06, and LTMW-07). Each figure shows both quarterly and semi-annual trends for the respective wells. Reviewing the figures shows similar concentration trends for both the quarterly and semi-annual data. Given that the wells on Hononegah Road are used only as intermediate sample locations, to show overall trends over time, the use of semi-annual sampling will provide an adequate depiction of concentration trends over time.

Comparing analytical results from the wells on Hononegah Road with those on Edgemere Terrace shows the area of groundwater affected with TCE continues to undergo natural attenuation as reflected in the slow decline in the TCE concentrations. Current TCE concentrations along Edgemere Terrace range from 2 to 9 µg/L. While it is highly unlikely that TCE concentrations will rise to exceed the 25 µg/L Intermediate Criteria, we appreciate the need to maintain a contingent remedial option. However, at these low concentrations, the existing pump and treat system is an inappropriate option as a contingent remedy. It will not destroy the TCE and will pump excessive amounts of clean groundwater. We have proposed ERD as an appropriate contingent remedy. ERD would not only destroy the VOCs, but would be focused on the specific area of affected groundwater. However, during our discussion you raised the question of whether implementing an ERD program could lead to increase VI risk. As we understand, your concern is that ERD could increase VI risk by either driving VOCs into the vadose zone where they could migrate to indoor air, or by converting TCE into more volatile vinyl chloride that would be more likely to find its way to indoor air. There are several lines of evidence as to why ERD would not lead to increased VI risk as follows:

- The ERD process enhances the rate at which VOCs break down in the groundwater (speeds up a natural process). Unlike a remedy such as sparging, there is nothing about the ERD process that

would tend to enhance transfer of the VOCs into the vadose zone. Rather, ERD destroys VOCs in place.

- The application of ERD along Edgemere Terrace would be similar to the 2010 ERD application near on-site monitoring wells MW-106 and MW-107. At these wells TCE concentrations were reduced from ~5 to 0.5 µg/L and ~60 to 10 µg/L, respectively with no detectable increase in the more volatile vinyl chloride (we observed the same destruction of TCE without the increase in vinyl chloride in the downgradient wells LTMW-01 and LTMW-02).
- As shown on the attached Figure 19 and Figure 20 from the 2009 Work Plan, the core of the area of affected groundwater, where the ERD application would be employed, is overlain by approximately 20 to 30 feet of unaffected groundwater. Since ERD application would focus at the core, any water undergoing ERD remediation would be overlain by 20 to 30 feet of unaffected groundwater. As a result, there would be essentially zero potential for water undergoing ERD remediation to be exposed to the water table surface where diffusion into the thick vadose zone could occur.
- There are no records of vinyl chloride detections in monitoring wells on Hononegah Road and Edgemere Terrace. This shows vinyl chloride does not accumulate in these environments and is unlikely to do so, particularly at these low concentrations.

Together, these lines of evidence show that there is no potential for ERD application, as a contingent remedy, to create a VI issue.

I hope this discussion and the attached information addresses your concerns. Please do not hesitate to contact me at (608) 828-8210 if you have additional questions or comments on this letter or the attached figures.

Sincerely,

James A. Buss

James A. Buss, P.G
Project Manager

Attachment:

Figure 1 – LTMW-04 CVOV Concentration Trend Quarterly Data
Figure 2 – LTMW-05 CVOV Concentration Trend
Figure 3 – LTMW-06 CVOC Concentration Trend
Figure 4 – LTMW-07 CVOC Concentration Trend
Figure 19 – Groundwater Screening Transect CC'
Figure 20 – Temporary Well Sample Results Transects B-B' and C-C'

Figure 1
LTMW-04 CVOC Concentration Trend

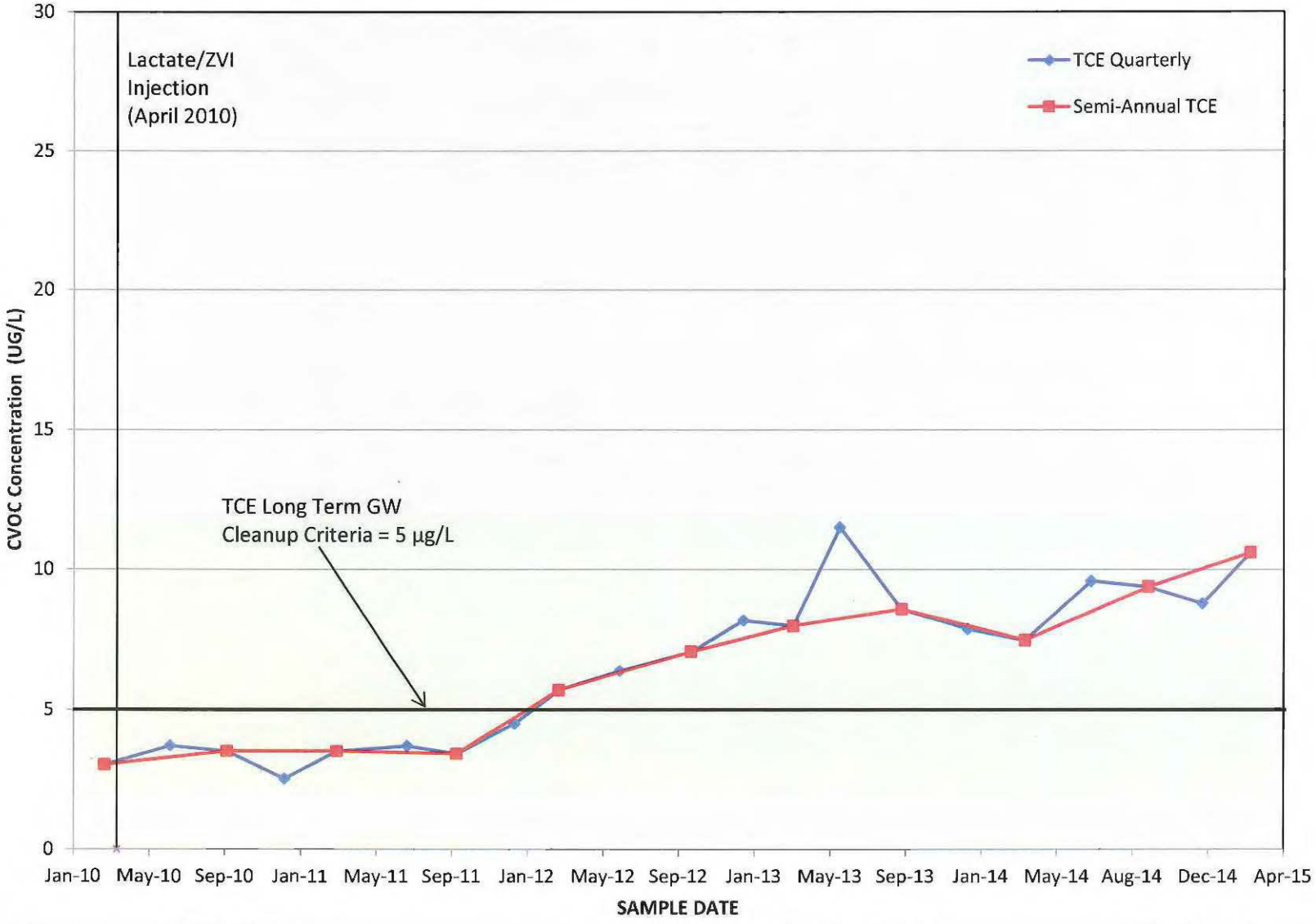


Figure 2
LTMW-05 CVOC Concentration Trend

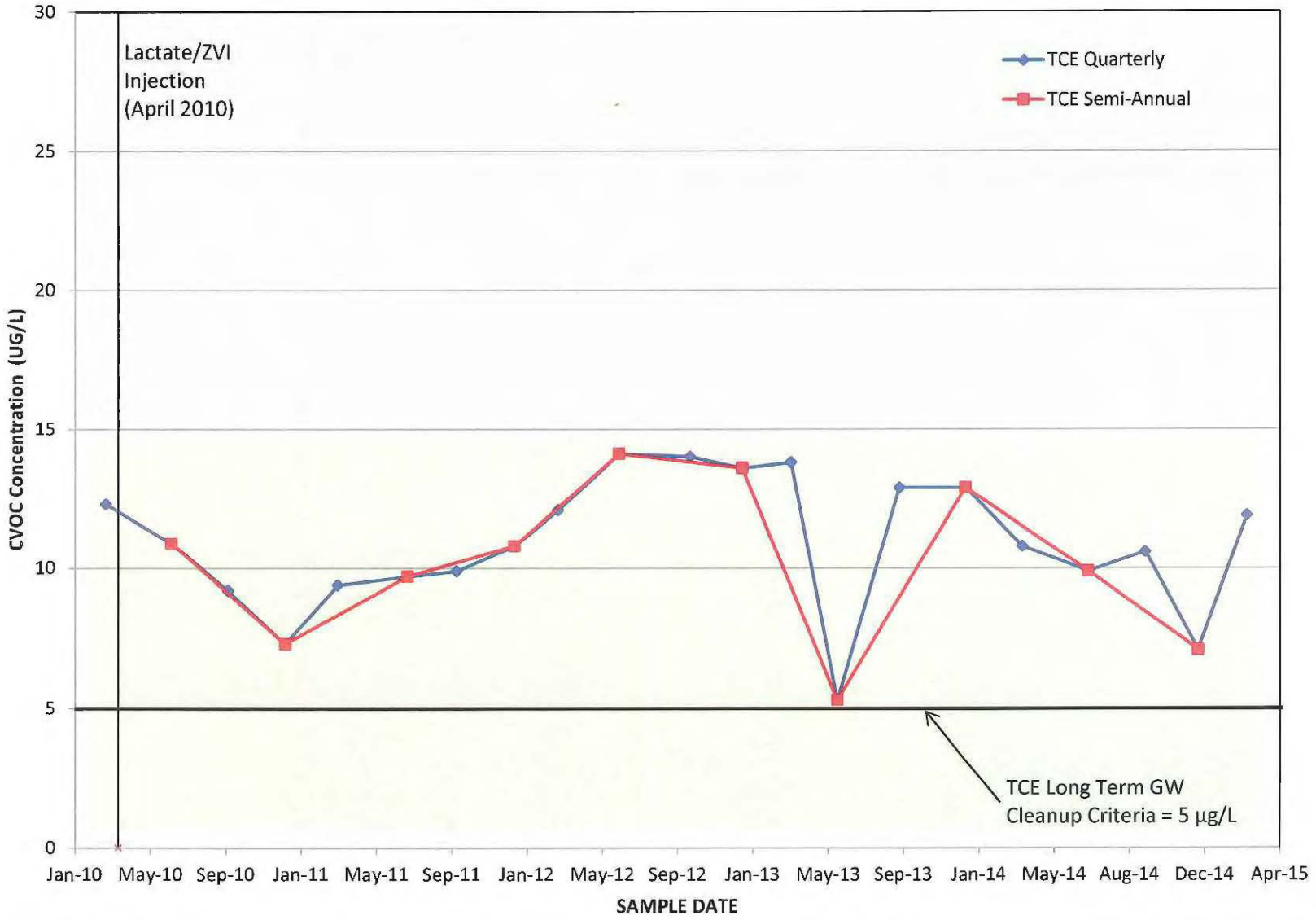


Figure 3
LTMW-06 CVOC Concentration Trend

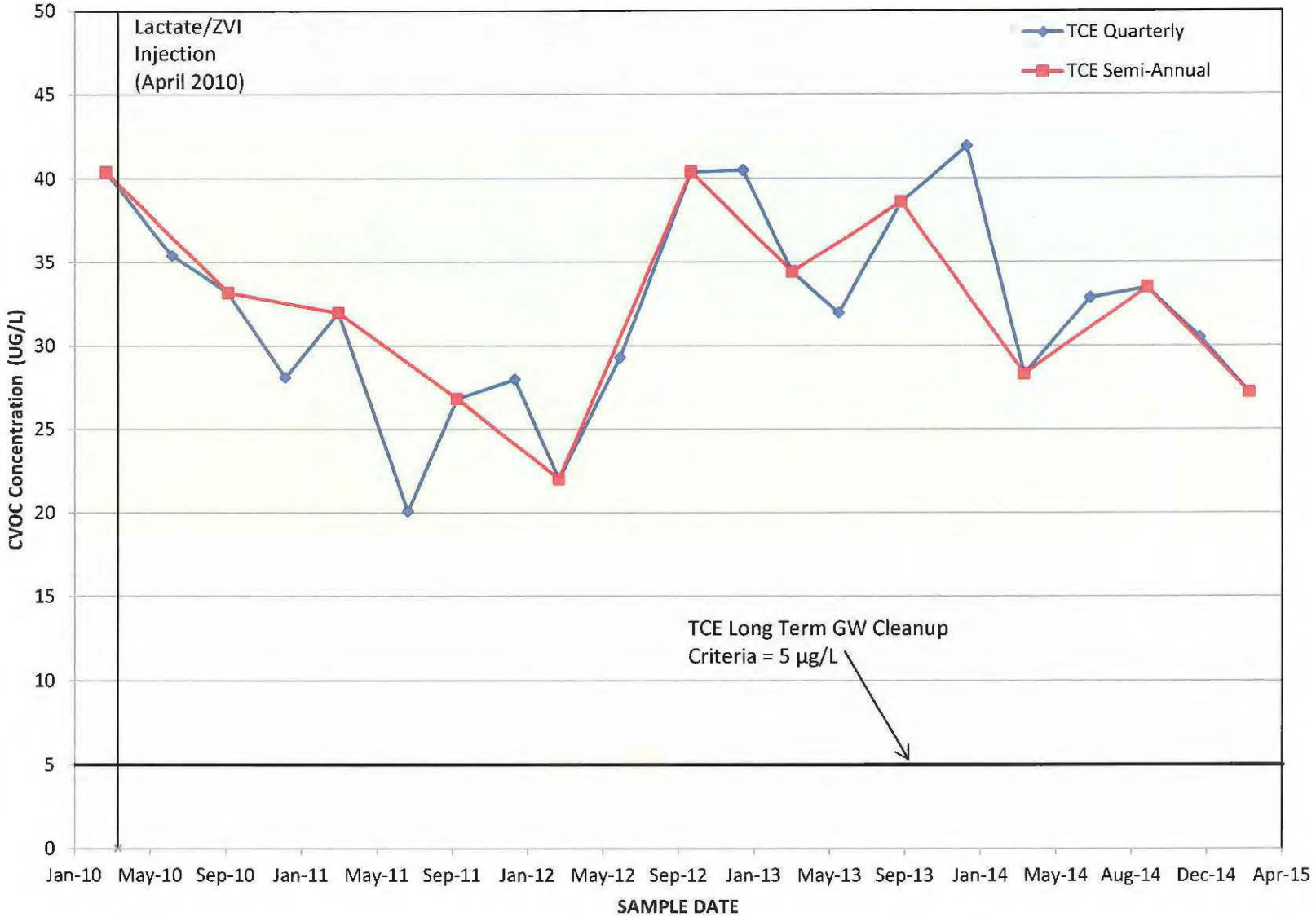
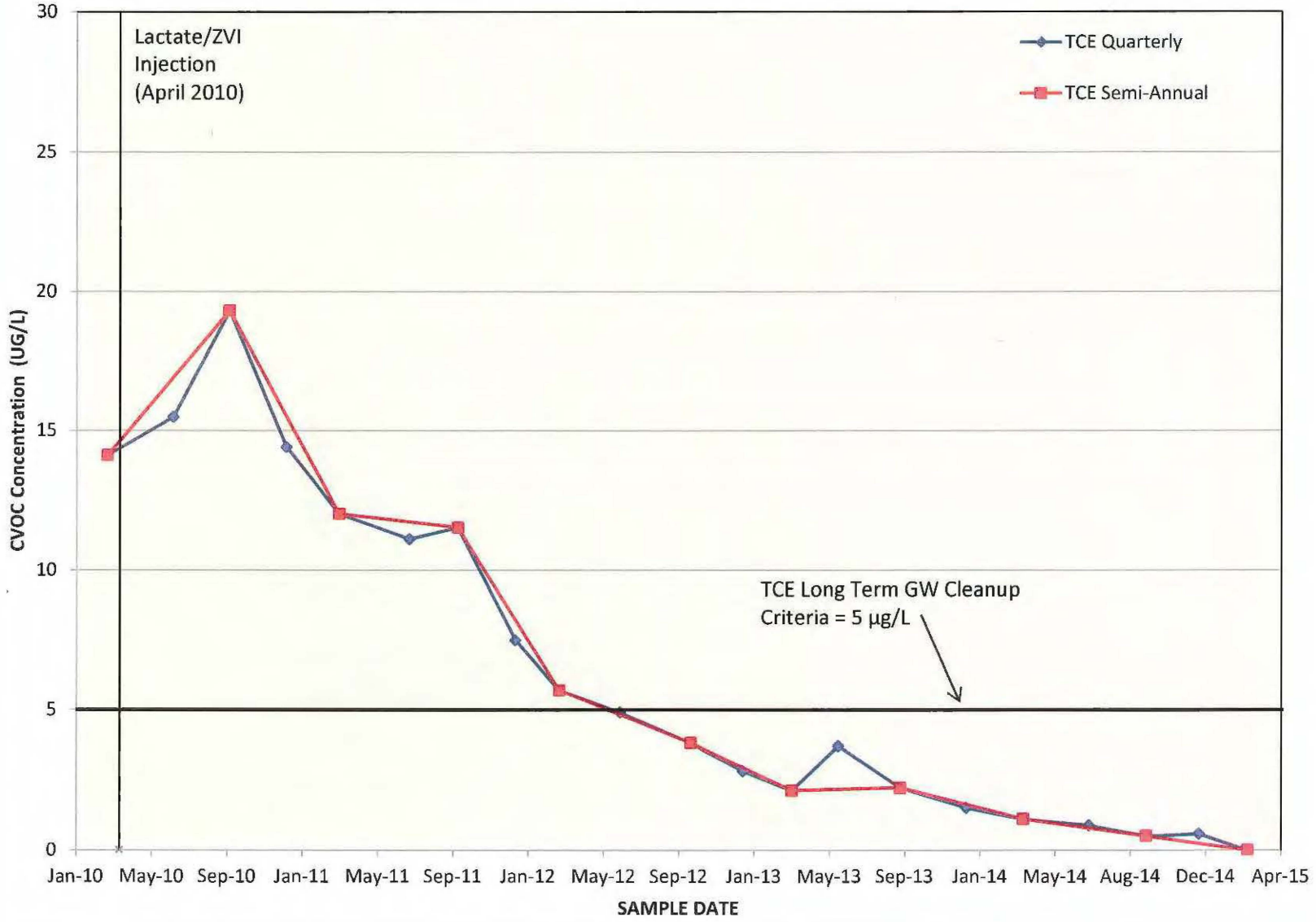
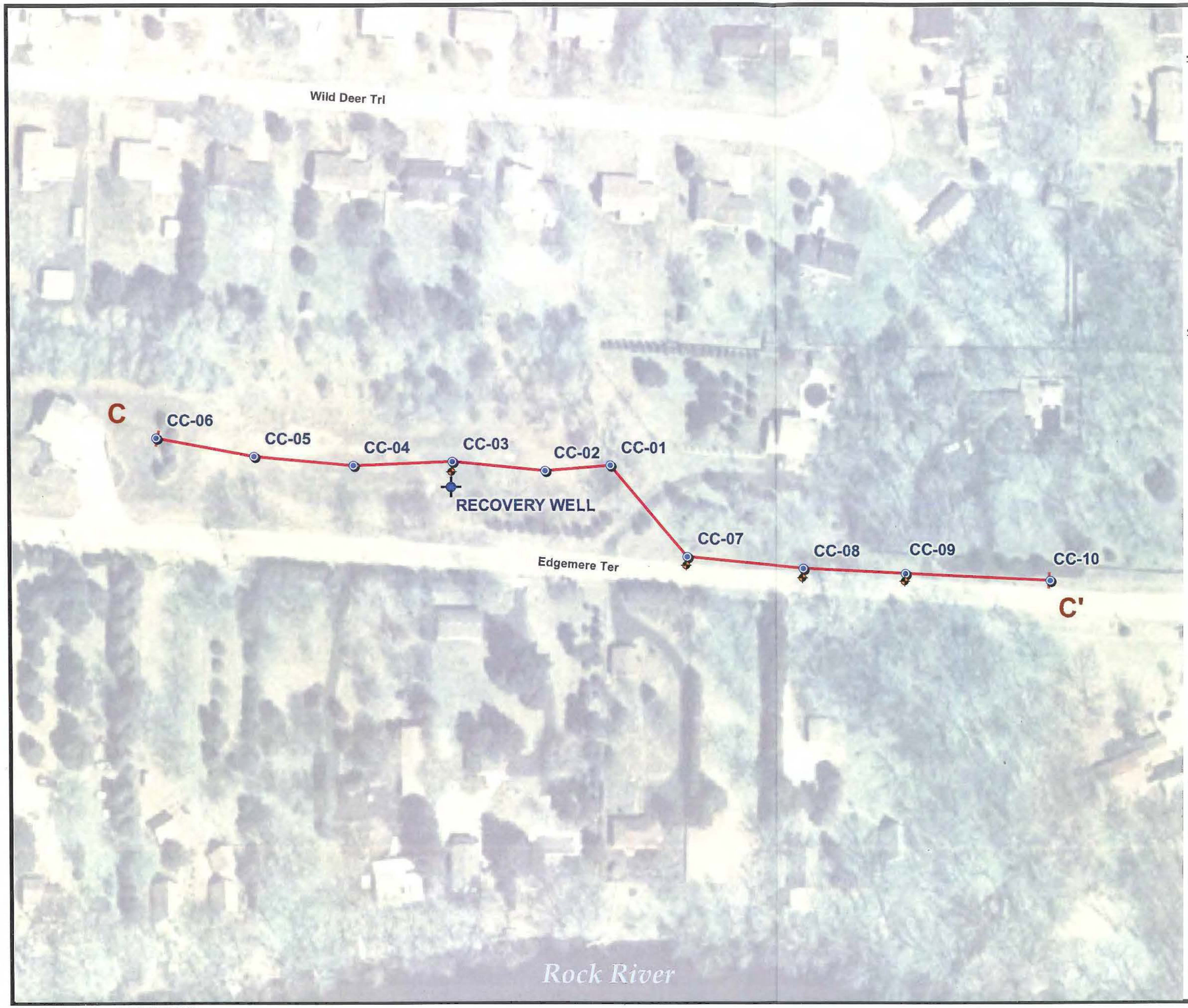


Figure 4
LTMW-07 CVOC Concentration Trend



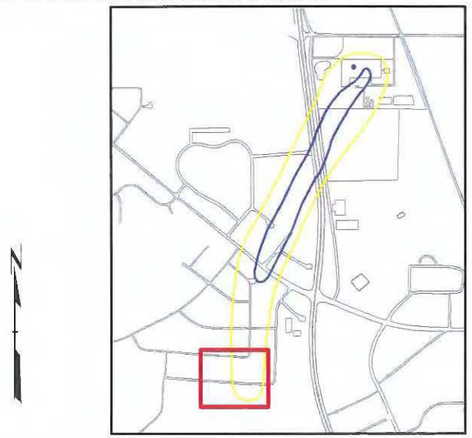


LEGEND

- TEMPORARY WELL LOCATION
- PROPOSED LONG-TERM MONITORING WELL
- TRANSECT LINE
- RECOVERY WELL

NOTES

1. BASE MAP IMAGERY FROM USDA – NATIONAL AGRICULTURE IMAGERY PROGRAM (JULY 2006), PAN SHARPENED WITH ILLINOIS NATIONAL AERIAL PHOTOGRAPHY PROGRAM IMAGERY (SPRING 2005).
2. RMT GPS SURVEY CONDUCTED 6/11/2008.



0 100 200 FEET

1 " = 100 '
1:1,200

PROJECT:	DANA HOLDING CORPORATION WARNER ELECTRIC ROSCOE, ILLLINOIS
SHEET TITLE:	GROUNDWATER SCREENING TRANSECT C-C'

DRAWN BY:	PAPEZ J	SCALE:	PROJ. NO. 00-002541.25
CHECKED BY:	JAB	AS NOTED	FILE NO. 25412505.mxd
APPROVED BY:	JAB	DATE PRINTED:	FIGURE 19
DATE:	FEBRUARY 2009	2/18/2009	

RMT

744 Heartland Trail
Madison, WI 53717-1934

P.O. Box 8923 53708-8923
Phone: 608-831-4444
Fax: 608-831-3334

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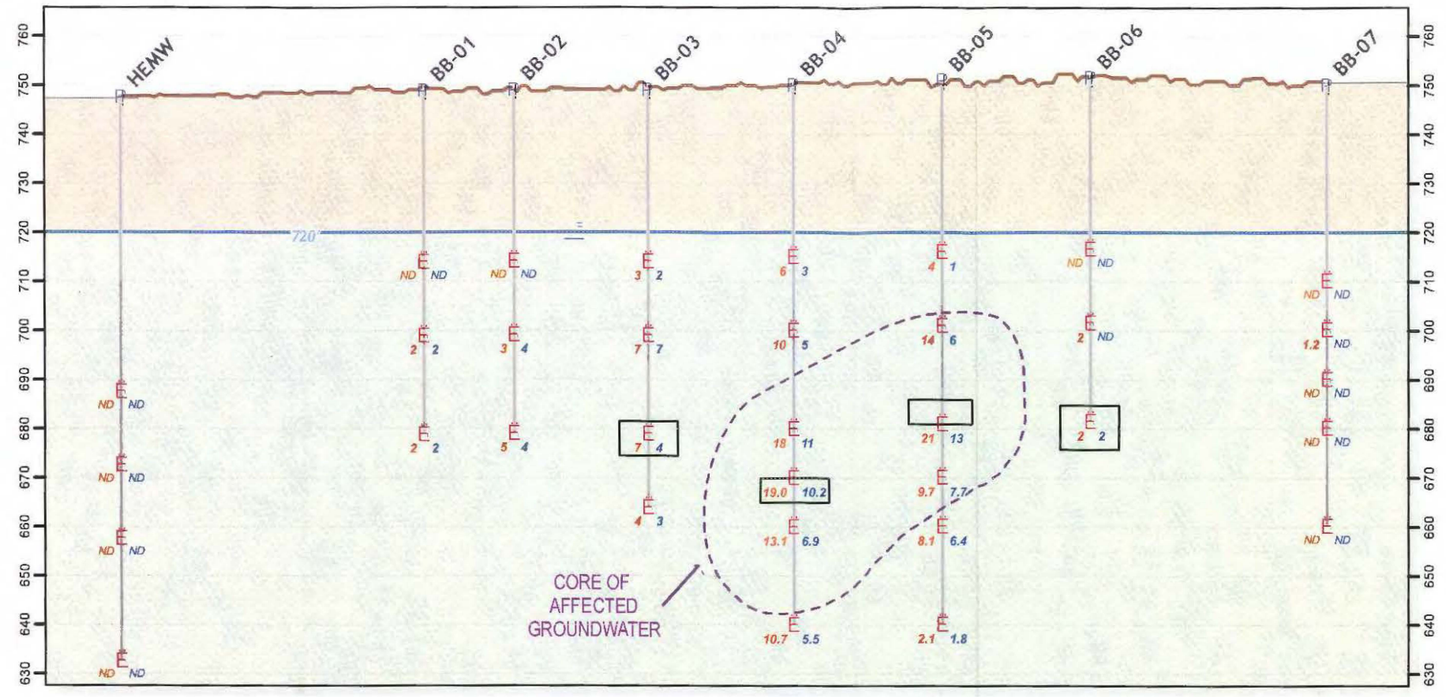

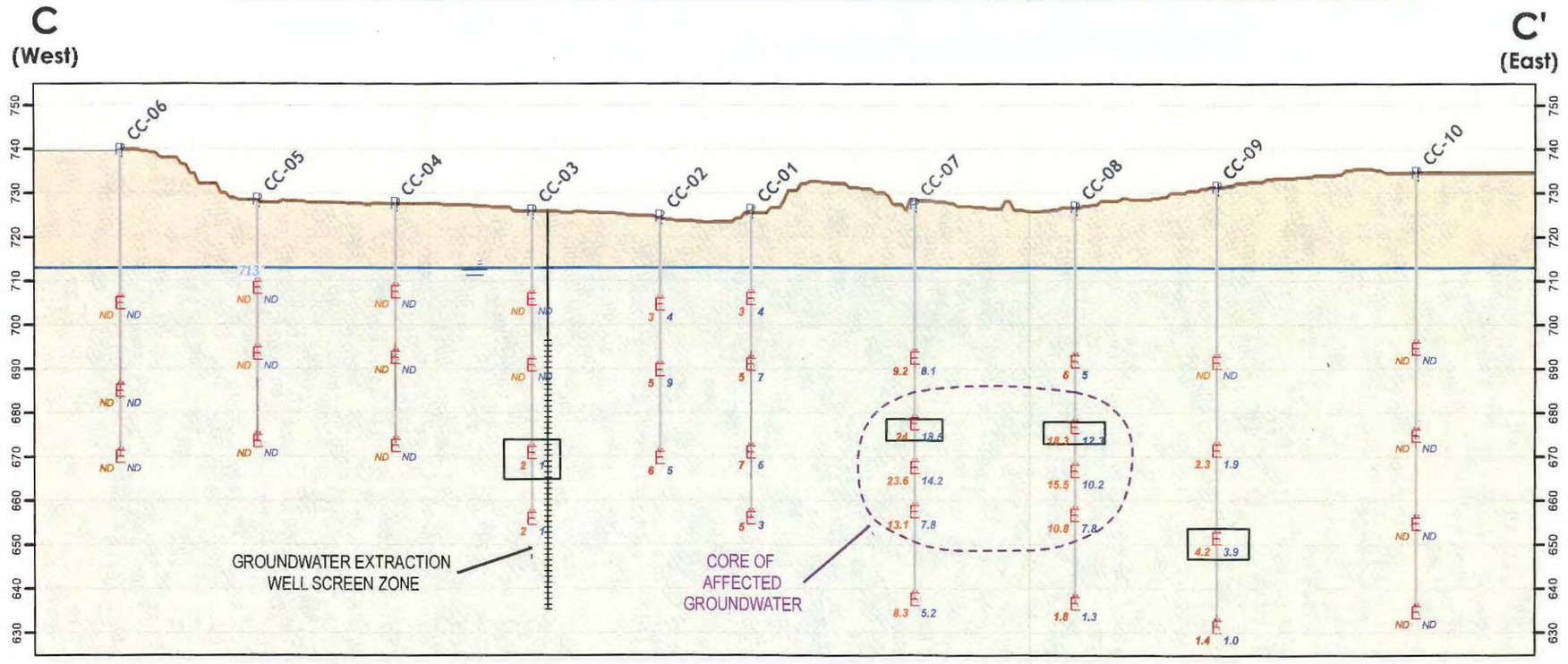

LEGEND

- BORING LOCATION
- GROUNDWATER SAMPLE LOCATION
  TCE (µg/L) DCE (µg/L)
- GROUND SURFACE PROFILE
- WATER TABLE
- PROPOSED WELL SCREEN INTERVAL
- CORE OF AFFECTED GROUNDWATER

NOTES

1. SAMPLE CHEMICAL RESULTS SUPPLIED BY MATRIX ENVIRONMENTAL, LLC AND PACE ANALYTICAL SERVICES, INC.
2. PROFILES AND ELEVATION INFORMATION BASED ON DATA FROM THE USGS NATIONAL ELEVATION DATASET (PIXEL RESOLUTION = 1/9 ARCSECOND).
3. CROSS SECTIONS HAVE APPROXIMATE 3.3 VERTICAL EXAGGERATION. HORIZONTAL UNITS ARE IN FEET, VERTICAL UNITS ARE IN FEET (MSL).

0 100 200 FEET

1" EQUALS ~100' HORIZONTAL
1" EQUALS ~30 ' VERTICAL
SCALE IS APPROXIMATE

PROJECT: **DANA HOLDING CORPORATION**
WARNER ELECTRIC
ROSCOE, ILLINOIS

SHEET TITLE:
TEMPORARY WELL SAMPLE RESULTS
TRANSECTS B - B' AND C - C'

DRAWN BY:	PAPEZ J	SCALE:	AS NOTED	PROJ. NO.	00-002541.25
CHECKED BY:	JAB			FILE NO.	254125xsec02.mxd
APPROVED BY:	JAB	DATE PRINTED:	2/18/2009		FIGURE 20
DATE:	FEBRUARY 2009				

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